COGNITIVE DISSONANCE AS A DETERMINANT OF CRITICAL THINKING, ACADEMIC ACHIEVEMENT AND ACADEMIC DISENGAGEMENT OF HIGHER SECONDARY STUDENTS

A

Synopsis

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1.0 INTRODUCTION

Education is a systematic process by which one gains knowledge, skills, experience and sound attitude .It makes one refined, cultured and civilized (Parankimalil, 2012). Honestly speaking it is education that influences the Affective, Psychomotor and Cognitive domains and enable us to deal with the emotions, bodily processes, and the skills related to cognition such as critical thinking and achievement. But one can visualize the sarcasm by the sayings of Krishnamurti (1961) said that *Education what we call now is just the accumulation of information and knowledge contained in the books, which any one can do who can read books.* The present education system focuses on just reading of books, provide bookish knowledge to students and is producing large number of robots and other class of technicians which might be useful in short term but not in a long journey. Criticizing the present Indian education system, the Prime Minister Narendra Modi in Times of India (2014) said that "Our education apparatus can't be one that produces robots. That can happen in laboratory. There has to be overall personality development". In the long run it is necessary that such skills should be developed which reflect the overall personality development.

Owing to the growing complexities due to globalization, there is a huge competition in the society in each and every sphere of life. It is therefore important to invest in education. NCF (2005) said education must provide means and opportunities to enhance child's creative expression. Life skills such as critical thinking, interpersonal communication, negotiation skills, problem solving and self-management are very critical for dealing with everyday challenges of life. Skills like critical thinking and problem solving will keep children engaged due to which they can also achieve higher in academics. It makes clear that it is necessary to enhance critical thinking, academic achievement and minimize academic disengagement.

In the modern era, students must be encouraged to think beyond their comfort zones, problematize their own paradigms and the world around them. Thinking beyond their comfort zones will help them to think critically which in turn can help them to become engaged in learning and achieve higher in academics. As mentioned by Karbalaei (2012), the most important goal of education is to provide students with opportunities of developing with concepts, the meanings, bias and logic in arguments so that they can think deeply and try to have a deeper understanding of the world they live in. Children will try to think

deeply and out of their comfort zone only when they will encounter such situations in which values, opinions, views, knowledge contradicts. Such situation where a student is confronted with these issues is considered as Cognitive Dissonance.

Cognitive Dissonance is a theory given by Festinger (1957). It came into light from the area of communication and social influence (Festinger, 1957). It is particularly concerned with cognitive behavior and is one of the most powerful theory in social psychology (Cowol, 2008). In general term "*Cognitive Dissonance is defined as the psychological tension resulting from incongruous beliefs, ideas, opinions and attitudes held simultaneously"*. This theory is based on the assumption that individuals have the disposition to move towards consistency .It asserts that there are some non fitting relations among the cognitive elements that gives rise to dissonance and creates a pressure to resolve that dissonance. Dissonance and consonance exists between the pair of elements and these elements are called as cognitions where cognition may be belief, attitude, knowledge or opinion. The relation between the cognitive elements may be irrelevant, dissonant or consonant .If the opinions have nothing to do with each other they are irrelevant, if one implies the other it is consonant and if they are contradictory they are dissonant. This dissonance should be resolved to remove the mental tension. There are strategies for reducing cognitive Dissonance such as reduce the importance of the dissonant beliefs, add more consonant beliefs that outweigh the dissonant beliefs, or change the dissonant beliefs so that they are no longer inconsistent. Highly motivated by the work of Festinger, Walton (2011) stated "Cognitive Dissonance is the uncomfortable psychological state resulting from perceived discrepancies or contradictions between the related cognition, cognitions or behaviors."

Cognitive Dissonance is defined from two different perspectives namely pure psychological and educational. Pure psychological perspective asserts that it is an uncomfortable state occurring internally when there is a conflict between new information/knowledge and the existing beliefs/ideas or opinions (Festinger, 1957). For example when we know that sun revolves around the earth, we are presented with evidence that earth revolves around the sun. From the educational psychology perspective, Piaget (1929) says Cognitive Dissonance is a way to facilitate the cognitive processes of accommodation and assimilation,

which are important for the development of knowledge. Accommodation and assimilation occur when new knowledge is presented in front of the learners and they must expend mental effort to incorporate this new information into their existing schema. There are some strategies to increase Cognitive Dissonance in classroom so that children can think deeply. Both of the perspectives are informative and important while considering Cognitive Dissonance in learning processes. The psychological perspective looks upon Cognitive Dissonance as a tension that should be resolved whereas on the other hand educational psychology perspective conceptualizes it as a means for fostering schema and develop the scope for dissonance to promote the development of new knowledge. Piaget (1975) said it is supposed that when a learner confronts a situation of cognitive dissonance their cognitive systems engage in the process of accommodating and assimilating new information/knowledge with already existing knowledge in the schema.

Neighbour (1992) said that cognitive dissonance is necessary feature of teaching. It is a kind of intellectual wedge between the learner's current beliefs, knowledge opinions and reality. We all are living in the world of dissonance but this dissonance if used in correct way can be used as a powerful tool in learning as it will help to think from multiple perspectives. In today's classroom learning is not meaningful as just discrete facts are told to children or just information is provided and focus on rote memory .There is a need to develop skills in children which helps them in deeper understanding of the content so that their concepts become clear. So today's classrooms must be such that students need to think out of their comfort zones ,face the situation with no one result as this will create dissonance which will stimulate all the neurons together and compel to think in various directions. Critical Thinking, Academic achievement and academic engagement are very important for the individuals in present era but the scenario indicates the lack of these crucial skills.

One of the advantages of Cognitive dissonance is that if there is dissonance in the mind of the child he will think from multiple perspectives which will help them to think critically (Eckles, 2009). Thus Cognitive Dissonance can be seen as related to Critical Thinking. The most important task of education is to develop high order thinking skills. Paul (2004) strongly asserted that critical thinking is central to both individual

and societal needs. In general critical thinking refers to the one that questions, does not takes anything without reason , considers consistency, sufficiency of argument, looks for verification and then apply justification. Critical thinking is defined by Ennis (1992) as "the activity of evaluation of arguments or propositions and making judgment that can guide the development of beliefs and taking action" It is not a single aim but is linked to other key aims of education .It is a fundamental goal which facilitates a rainbow at other ends as a student learns to think critically, they become master in all mathematics, historical and scientific thinking. Lai (2011) said that Critical Thinking helps the child to think with multiple perspectives, analyze, evaluate make inferences and then take decisions accordingly. Reports have shown that Elementary and Secondary students do poorly on test items requiring high order thinking skills. There has also been decline in the performance of students which is due to less use of high order thinking skills. Further, Quality education survey, an international survey conducted by Wipro (2012) claimed that Students exhibit rote learning and show comparatively better performance in questions that have a procedure but are not able to develop the deeper understanding or the application of the concepts giving the sad view of critical thinking and reduced level of performance among students. The above stated findings present gap in teaching of students and development of critical thinking in students which must be the key point of any education system.

The study conducted by Wipro (2012) also showed that there is the decrease in the level of performance of students as compared to international standards. University of Southern Mississippi (2012) classroom responsibility of faculty and students, a handbook in which it was stated that whenever the children are in the phase of learning something new, they must come across dissonance which is a essentially a predecessor of intellectual and moral growth but it should not be in excess that can cause harm to child. Aronson (1975) stated Cognitive Dissonance is a driving force for learning. This clearly depicts that Cognitive Dissonance and Academic Achievement are associated. Academic achievement is defined as the mastery gained in the particular area and in a specific course. It is the aggregate of knowledge and expertise attained in the field of academics. (Ulgen as cited in Karagol & Bakmezei, 2015). Parents, teachers and educators want that their child climb the ladder of success which can be done by Cognitive Dissonance.

One of the important goals of education is to educate and train the children and to make them proficient for a particular career and one academic record has a lot of weightage in it. It is one of the indicators measuring the ability of a child in a particular subject. Fredricks et al. (2004) reported that academically strong children are less disengaged. Dissonance helps the person to be engaged in the activity of finding out solutions to problems. Steele (1997) stated that Psychological Disengagement is a common phenomenon in school which means it is one of the challenges that a teacher faces in the classroom. It can take many forms, including lack of participation, effort, failure to take interest deeply in the academics and this problem may occur when academics are boring. When the passive learning is there disengagement occurs. Disengagement in general is defined as process of withdrawal or non-involvement in an activity. Demerouti et al. (2001) defined Disengagement as the student's passivity in relation to a task or an activity at hand including distancing oneself from one's work and experiencing negative emotions toward the work in general. Disengagement is seriously a threat for children as it will lead student not to think and there will be reduction in academic scores. The University of South Australia led *Behaviour at School Study (BASS* , 2013) found talking out of turn (50%); avoiding doing schoolwork (43%) and disengaging from classroom activities (41%) as most common problems among students. National Research council on motivation (2003) also reported about 40% students as chronically disengaged from school.

Thus it is evident that Cognitive Dissonance manifests itself in all the crucial ability of student viz. critical thinking, reasoning, academic achievement, disengagement .Owing to this association /relationship the researcher is curious to know repercussions of Cognitive Dissonance on higher secondary level students. So for the present study, efforts will be made to find out the relationship of Cognitive Dissonance with Critical Thinking, Academic Achievement and Academic Disengagement and further the best strategy to reduce/ increase cognitive dissonance will be found out to enhance critical thinking, achievement and to reduce disengagement among students.

1.1 EMERGENCE AND JUSTIFICATION OF THE PROBLEM

If we critically review the system of Education in Indian schools, it is observed that there is a tendency of including more and more content in the form of factual information and providing rote learning in the

syllabus as a result of which children are lacking in high order thinking skills which include logical thinking, abstract thinking, reasoning, critical thinking due to which they are disengaged and have less level of achievement. It can be visualized that knowledge is just poured in the brains of children and spoon feeding is very common .Instead of all this, In the present scenario students should have such skills by which they are able to survive in the competitive world and for this purpose they should have skills such as life and career skills ,information media and technology skills and most important learning and innovation skills such as communication skills ,creativity, collaboration and critical thinking (Framework for 21 century learning, 2011). RAND Corporation (1994) asserts that the trademark of flourishing system of education is escalating or maintaining achievement of students. It is also necessary to reduce academic disengagement for the better future of children. Therefore, it is necessary to shift the linchpin of education from just providing knowledge from the books to a larger aim of development of this bunch of sound and important qualities in the future of our country i.e. students of India. In this regard it was thought that there is a need for finding a potent factor that could play an important role in critical thinking, increasing level of achievement and reducing academic disengagement. Cognitive Dissonance can be seen as a ray of hope but Cognitive Dissonance has been primarily studied by two crucial perspectives of academics i.e. psychology and education. Pure psychological perspective believes that it is an inner condition which occurs when new information is in clash with generally held idea/belief. (Festinger, 1957) and conceptualizes it as a tension which must be resolved. Brehm and Wicklund (2013) psychologically assumed that information which increases dissonance should be avoided or rejected. On the other hand educational perspective considers it as a means to facilitate the cognitive processes by the process of accommodation and assimilation (Piaget, 1929) and looks upon it as a way of fostering schema and design opportunities for dissonance to promote construction of knowledge. In contrast Brehm and Wicklund (2013) said educationally Cognitive Dissonance is not looked upon as an experience which should be avoided rather it is seen as a sign of intellectual growth. F. Scott Fitzgerald (n. d.) famously said- “The test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time and still retain the ability to function”. There exists a perplexity about the nature of Cognitive Dissonance that whether it should be resolved or created

for benefit of children.

To have a deep understanding about Cognitive Dissonance, the researcher explored the related literature and found some studies of Cognitive Dissonance in relation to religious or spiritual beliefs (Balboa, 2014), moral cognition (Tsang, 2002), Self-Construal (Lee & Jeyaraj, 2014), Moral emotions and Conscience (Breslavs, 2013), Team Success (Vujosevik, 2011), Well-being (Lyubomirsky, 2001), Procrastrination (Angelina, 2014) , Attitude Change (Rouhohalla , Fatehma & Mahmood, 2013) , Workplace (Prvulovic, 2015), Psychopathic Personality Traits (Murray ,Wood & Lillenfeld, 2012), Decision Making (Allahyani & Ahmad, 2012), Self-complexity (Heath, 2011) .

In addition, the researcher also found studies of Cognitive Dissonance particularly in relation to critical thinking. Mavroskoufis (2014) founded that using Cognitive Dissonance or impasse driven learning cautiously leads to development of critical reflection which is one of the important pre-condition for conceptual change. Chabrak and Craig (2013) reported that students resolve Cognitive Dissonance and develop critical thinking by change in attitude, urging reform and by falsely thinking they are emancipated in accounting subject. Frager (1984) and Johnson (1979) also claimed that children must be confronted with the dissonance of incompatible/contrasting ideas to truly engage in the process of critical thinking. (Seel, 2012) reported that Cognitive Dissonance is a sort of activator in the process of learning which helps the students in the learning such as problem solving and trial or error learning which results in the development of new knowledge.

It is clear from the above stated researches that Cognitive Dissonance and critical thinking are very well connected .Since critical thinking also fosters academic achievement, so the relationship of Cognitive Dissonance and academic achievement also needs concern. Researches have proved that Critical thinking is directly proportional to Academic Achievement by Karlabaei(2012) , Wakalua (2014), Nasrabadi et al. (2012) and Nordin (2015). These all studies showed that if the level of critical thinking is higher ,the information is organized in such a systematic way that it can be operated easily which helps the student to reason easily and properly, meet the challenges related to academics and have enhanced academic achievement. Having an overview of these studies it can be said that critical thinking can be enhanced by

Cognitive Dissonance and level of Critical thinking is associated with academic achievement so directly academic achievement can be enhanced .Bothelo (2013), Oataibi and Moharib (2013) and Rui (2008) found that cognitive dissonance and its different dimensions are negatively correlated with academic achievement. On the contrary Sharpe (2014) reported that there should be Cognitive Dissonance in classes which can lead to Academic Success, Academic Rigor and Resilience. Vries, Bryne and Kehoe (2014) investigated that experiencing Cognitive Dissonance leads to higher levels of activation in the several regions of the brain. Thus, there exists a dilemma in the studies mentioned so far that whether Cognitive Dissonance is related to Academic Achievement positively or negatively.

In addition to the association of Cognitive Dissonance with critical thinking and academic achievement, Cognitive Dissonance also manifests itself in the context of Academic Disengagement. Kaplan (2002), Virginia (2009), Dean & Polly (2013) claimed that Cognitive Dissonance is necessary for the children as it helps the child in being engaged whereas Rui (2008*)* stated that both the groups i.e. the group having positive dissonance and the group having negative dissonance are disengaged considerably.

Owing to the researches reviewed so far researcher didn't find any crystal clear information about the nature of Cognitive Dissonance on different aspects/dimensions of educational realm. It was also found that the results were contradictory to each other in almost all the concerned variables. Researches have been done on Cognitive Dissonance in context of psychological perspective but its educational perspective have been overlooked and if they are in the educational perspective they are not able to arrive at a substantive conclusion. It is evident from above that we are still devoid of clear cut information about the Cognitive Dissonance so its effect must be identified. The researcher after a deep study did not find any research of cognitive Dissonance in relation to Critical Thinking, Academic achievement and Academic disengagement together. Though studies on Cognitive Dissonance have been conducted at international level but there is a dearth of studies at national level which motivated the researcher to explore this naive field to find out the linkage between the above said variables. This study will prove beneficial for the society because by knowing the positive or negative relationship of Cognitive Dissonance with these variables, it can be used accordingly to enhance critical thinking, academic achievement and reduce disengagement. Therefore the researcher has chosen *Cognitive Dissonance as a determinant of Critical thinking Academic Achievement*

and Academic Disengagement of Higher secondary students as the topic of research.

Thus this study will be a new venture in the field of education and will solve the research questions as follows:

- What is the level of Cognitive Dissonance in higher secondary students?
- Is there any relationship between Cognitive Dissonance and Critical Thinking?
- Is there any relationship between Cognitive Dissonance and Academic Achievement?
- Is there any relationship between Cognitive Dissonance and Academic Disengagement?

  Based on the kind of relationship between Cognitive Dissonance and Critical Thinking, Academic achievement, Academic Disengagement the following research question will also be answered:

- Which strategy of Cognitive Dissonance is best in order to enhance Critical Thinking, Academic Achievement and reduce Academic Disengagement?

1.2 STATEMENT OF THE PROBLEM

In the context of above justification, the researcher frames the research problem as below:

Cognitive Dissonance as a determinant of Critical thinking, Academic Achievement and Academic Disengagement of Higher Secondary Students and to investigate the best strategy of Cognitive Dissonance to enhance Critical thinking, Academic achievement and reduce Academic Disengagement.

1.3 DEFINITIONS OF THE TERMS TO BE USED IN THE STUDY

1.3.1 COGNITIVE DISSONANCE

Walton (2011) stated "Cognitive Dissonance is the uncomfortable psychological state resulting from perceived discrepancies or contradictions between the related cognition, cognitions or behaviors."

OPERATIONAL DEFINITION

In the present study Cognitive Dissonance will be considered as contradictions in opinions, views, values, beliefs and ideas which are important to knowledge development.

1.3.2 CRITICAL THINKING

Ennis (1992) as "the activity of evaluation of arguments or propositions and making judgment that can guide the development of beliefs and taking action"

OPERATIONAL DEFINITION

In the present study critical thinking will be considered as their ability to synthesize, analyze and evaluate, apply induction, deduction and overall reasoning skills.

1.3.3 ACADEMIC ACHIEVEMENT

According to Good (1973), "Academic achievement is the knowledge attained or skill developed in the school subject usually designated by test scores or marks assigned by the teacher or both."

OPERATIONAL DEFINITION

In this study the term Academic achievement involves performance of students in Science subject as will be indicated by their test scores.

1.3.4 ACADEMIC DISENGAGEMENT

Mac.Millan (2003) defined, " Academic Disengagement as the students feeling disconnected from the academics and appearing to have little value for academics and its related outcomes.

OPERATIONAL DEFINITION

In the present study Academic disengagement means the withdrawal or non involvement of students from activities carried out in the classroom and their passivity towards work.

1.4 OBJECTIVES OF THE STUDY

1. To study the level of Cognitive Dissonance present in higher secondary students.
2. To study the level of Critical thinking of higher secondary students.
3. To study the level of Academic Achievement of higher secondary students.

4. To study the level of Academic Disengagement of higher secondary students.
5. To study the relationship between Cognitive Dissonance and Critical Thinking of higher secondary students.
6. To study the relationship between Cognitive Dissonance and Academic Achievement of higher secondary students.
7. To study the relationship between Cognitive Dissonance and Academic Disengagement of higher secondary students
8. To find out the contributory role of Cognitive Dissonance in Critical Thinking, Academic Achievement and Academic Disengagement.
9. To identify the best strategy of Cognitive Dissonance in order to enhance Critical Thinking, Academic Achievement and to reduce Academic Disengagement.

1.5 HYPOTHESES OF THE STUDY

1. There will be no significant relationship between Cognitive Dissonance and Critical Thinking of higher secondary students.
2. There will be no significant relationship between Cognitive Dissonance and Academic Achievement of higher secondary students.
3. There will be no significant relationship between Cognitive Dissonance and Academic Disengagement of higher secondary students.
4. There will be no contributory role of Cognitive Dissonance in Critical Thinking, Academic Achievement and Academic Disengagement of higher secondary students.
5. There will be no significant difference in the different strategies of Cognitive Dissonance for enhancing Critical Thinking, Academic Achievement and reducing Academic disengagement of higher secondary students.

1.6 DELIMITATIONS OF THE STUDY

1. The study will be delimited to higher secondary schools of Agra city having science stream.
2. The study will be delimited to schools of C.B.S.E, U.P board and DEI board.

3. The study will be delimited to class XI students.

1.7 METHODOLOGY OF THE STUDY

1.7.1 VARIABLES OF THE STUDY

The Independent Variable of the Study is

1. Cognitive Dissonance

The Dependent Variables are

1. Critical Thinking
2. Academic Achievement
3. Academic Disengagement

Extraneous Variables of the study

The extraneous variables of the study are shown in the table

Table 1.1: Control of Extraneous Variables

Category of Variables	Extraneous Variables	Controlling Techniques	Method Of Control Of Extraneous Variable
Subject related variables	Age SES Anxiety Motivation	Sample selection Rapport establishment	Randomization Researcher
Environment related variables	Classroom climate Noise Light Test time Test Administration	Rapport establishment Remove Constancy	Researcher Psychologically by researcher Researcher
Sequence related variables	Practice	Eliminated	Psychologically by Researcher
	Fatigue	Eliminated	Psychologically by Researcher
	Cooperation	Constancy	Researcher

1.7.2 METHOD OF THE STUDY

A mixed approach will be used for the following study. Initially the correlation method will be used to find out product moment correlation of Critical Thinking , Academic Achievement and Academic Disengagement with

Cognitive Dissonance and its relative contributory role and then whatever relationship of Cognitive Dissonance with Critical Thinking, Academic Achievement and Academic Disengagement is found, further to fulfill the last objective i.e. To find the best strategy of Cognitive Dissonance to enhance Critical Thinking , Academic Achievement and reduce Academic Disengagement experimental method will be used

1.7.3 Research Design

The research design for the Experimental method will be three group pre-test post test design which will consist of three experimental groups which will be given treatment by different strategies of Cognitive Dissonance.

	Experimental Groups		
	1 N=20	**2 N=20**	**3 N-20**
Pre-Test	Test of Critical Thinking , Academic Achievement and Academic Disengagement		
Treatment	1st Strategy *	2nd Strategy	3rd strategy
Post test	Test of Critical Thinking Academic Achievement and Academic Disengagement		

*The strategies which will be used to enhance /reduce Cognitive Dissonance will be decided after the results of the survey.

There are some strategies for enhancing Cognitive Dissonance such as:

1. Present readings which show alternative viewpoints to those presented in the text books.

2. When deciding on the sequence of course topics, concepts, consider arranging order in a way that juxtaposes and highlights incompatible view points or perspectives.

3. Use of Socratic Method

There are some strategies for reducing cognitive dissonance such as:

1. Change the cognition

2. Justify the cognition by changing the conflicting cognitive cognition.

3 Justify the cognition by adding new cognitions

1.7.4 Sample Selection

The sample of 700 students (350 boys and 350 girls) of higher secondary level (XI class) studying in school affiliated to CBSE, U.P and DEI board will be selected by multistage random sampling method. The procedure of sample selection is presented in the form of flow chart as follows:

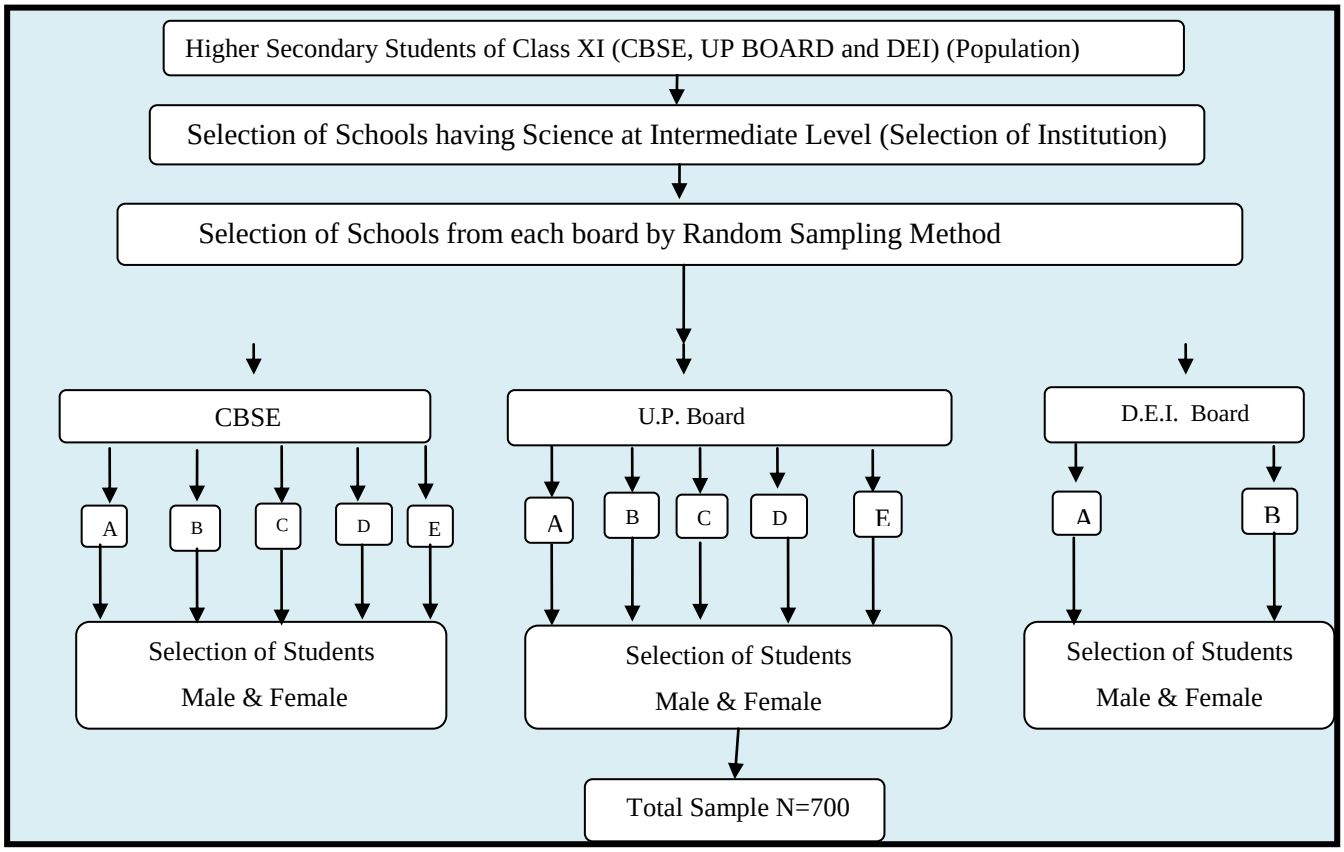


Fig 1.1 Selection of the Sample

For Experimental method the sample will include 60 students in which schools will be selected by purposive sampling and students will be selected by random sampling and placed in three different experimental groups which will be given treatment by different strategies of Cognitive Dissonance in order to enhance Critical Thinking, Academic Achievement and reduce Academic Disengagement.

1.7.5 TOOLS OF THE STUDY

1. Watson Glaser II Critical Thinking Appraisal (2010) after adapting in Indian situations [Reliability

Test retest reliability (0.81-0.89).Validity – High Convergent and criterion validity].

2. Self constructed tool for measurement of Cognitive Dissonance based on the Cognitive Dissonance Scale by Cassel, Chow and Reiger (2002).

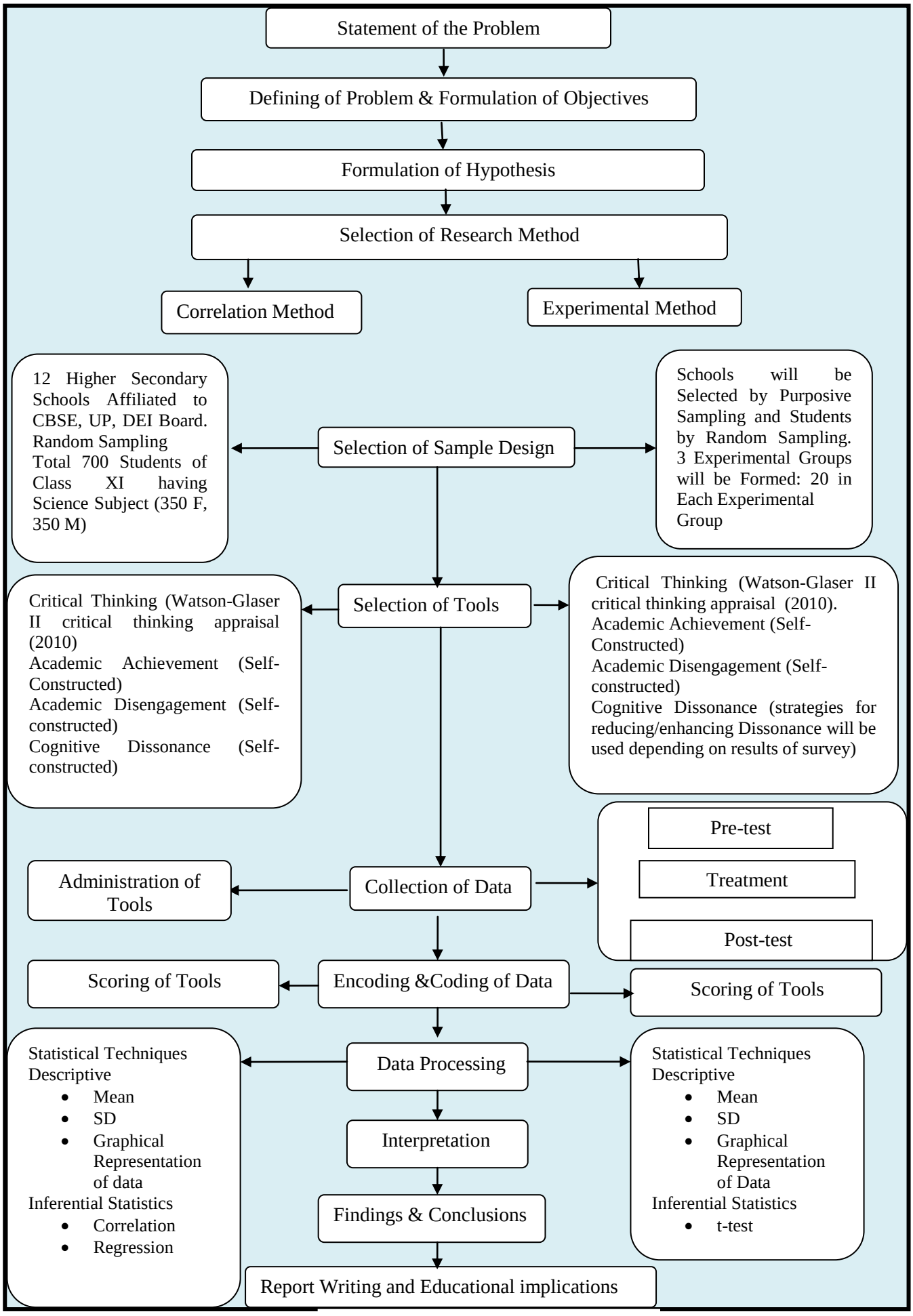
3. Self-Constructed tool for the measurement of level of Academic Disengagement.

4. Self-Constructed tool for the measurement of Academic Achievement.

1.7.6 STATISTICAL TECHNIQUES

Descriptive Statistics: Mean, Standard Deviation and Graphical Representation.

Inferential Statistics: Pearson Product moment correlation, Regression Analysis, t - test



RESEARCH PROCEDURE

1.8 SIGNIFICANCE OF THE STUDY

As we all know that Education is the building block of our nation, it is also a fact that a nation having a strong and effective system of education lead the world socially and economically.

The present system of education puts so much emphasis on reading books, giving notes and lectures that it completely ignores critical thinking development and as seen the children are disengaged and have less level of achievement. The students of today would be the future of tomorrow .These students would be the future teachers, leaders, consumers and the workforce in near future so they need to respond flexibly to complex problems, communicate effectively, manage information, and work in teams and produce new knowledge. This is possible if the critical thinking skills of the students are developed due to which child becomes engaged and performs better. Therefore for the sake of development of these skills, engagement and for better performance the present study will have multifold significance in the field of education Information about Cognitive Dissonance can help faculty become more sensitive to the students in the classroom. It can also serve as a guide in thoughtfully and systematically designing learning experiences for maximum learning in the classroom. Study can be used in identifying the exact relationship of Cognitive Dissonance with Critical Thinking, Academic Achievement and Academic Disengagement and then providing instruction according to it will contribute to more effective learning. The information about the relationship of Cognitive Dissonance will be helpful in selecting the teaching strategies beneficial to a particular subject. If the result of the study would say that the Cognitive Dissonance is necessary for Critical Thinking, Academic Achievement and reducing the level of Academic Disengagement then after finding the best strategy of enhancing Cognitive Dissonance in the classroom , it will be used as a tool for enhancement of Critical Thinking , Academic Achievement and reducing disengagement and if Cognitive Dissonance is found have inverse relationship then the best strategy for reducing the Cognitive Dissonance in the classroom would be used to enhance Critical Thinking , achievement and reduce disengagement. Knowledge of Cognitive Dissonance will provide the base to curriculum planners for designing the more appropriate curriculum. Instructional materials can also be prepared by utilizing the knowledge about Cognitive Dissonance such that by creating/reducing dissonance the learning of students can be made effective.

The present research can also be seen as effort if cognitive dissonance is found useful in education in the direction of transformation in the teaching methodology from teaching using traditional methods towards teachers using Cognitive Dissonance in right amount to enhance the critical thinking skills , increase engagement and academic achievement .

The parents will also be benefitted from the study as the data will assist parents to know the importance of Cognitive Dissonance and will help in maximizing the potential of students in order to develop Critical thinking skills and achieve educational success.

Thus, the study undertaken by the researcher is expected to prove the relationship of Cognitive Dissonance with Critical Thinking, reducing disengagement and increasing achievement.

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